



# National Voluntary Laboratory Accreditation Program



## SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

### Indiana Division of Weights and Measures

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### CALIBRATION LABORATORIES

### NVLAP LAB CODE 200421-0

Scope Revised: 2006-07-12

**NVLAP Code:** 20/A01

ANSI/NCSL Z540-1-1994; Part 1

Compliant

### DIMENSIONAL

**NVLAP Code:** 20/D13

Surveying Rods and Tapes

Range	Best Uncertainty ( $\pm$ ) in inches <sup>note 1</sup>	Remarks
1 in	0.0022	Rigid Rule
2 in	0.0038	Rigid Rule
3 in	0.0023	Rigid Rule
4 in	0.0032	Rigid Rule
5 in	0.0034	Rigid Rule
6 in	0.0041	Rigid Rule
7 in	0.0030	Rigid Rule
8 in	0.0030	Rigid Rule
9 in	0.0020	Rigid Rule
10 in	0.0019	Rigid Rule
11 in	0.0019	Rigid Rule
12 in	0.0015	Rigid Rule
12 in	0.0460	Rigid Rule (aluminum)
18 in	0.0411	Rigid Rule (aluminum)
24 in	0.0283	Rigid Rule (aluminum)

2006-01-01 through 2006-12-31

Effective dates

For the National Institute of Standards and Technology



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36 in	0.0342	Rigid Rule (aluminum)
48 in	0.0535	Rigid Rule (aluminum)
60 in	0.0620	Rigid Rule (aluminum)
72 in	0.0705	Rigid Rule (aluminum)
84 in	0.0762	Rigid Rule (aluminum)
96 in	0.0776	Rigid Rule (aluminum)
1 ft	0.0045	Bench Method
2 ft	0.0056	Bench Method
3 ft	0.0056	Bench Method
4 ft	0.0068	Bench Method
5 ft	0.0058	Bench Method
6 ft	0.0098	Bench Method
7 ft	0.0082	Bench Method
8 ft	0.0091	Bench Method
9 ft	0.0093	Bench Method
10 ft	0.0092	Bench Method
11 ft	0.0156	Bench Method
12 ft	0.0151	Bench Method
13 ft	0.0189	Bench Method
14 ft	0.0184	Bench Method
15 ft	0.0224	Bench Method
16 ft	0.0217	Bench Method
1 ft	0.0116	Tape to Tape
2 ft	0.0235	Tape to Tape
3 ft	0.0289	Tape to Tape
4 ft	0.0277	Tape to Tape
5 ft	0.0357	Tape to Tape
6 ft	0.0367	Tape to Tape
7 ft	0.0269	Tape to Tape
8 ft	0.0371	Tape to Tape
9 ft	0.0443	Tape to Tape
10 ft	0.0365	Tape to Tape

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15 ft	0.0287	Tape to Tape
20 ft	0.0292	Tape to Tape
25 ft	0.0410	Tape to Tape
30 ft	0.0369	Tape to Tape
35 ft	0.0347	Tape to Tape
40 ft	0.0397	Tape to Tape
45 ft	0.0333	Tape to Tape
50 ft	0.0375	Tape to Tape
55 ft	0.0509	Tape to Tape
60 ft	0.0399	Tape to Tape
65 ft	0.0438	Tape to Tape
70 ft	0.0450	Tape to Tape
75 ft	0.0452	Tape to Tape
80 ft	0.0421	Tape to Tape
85 ft	0.0427	Tape to Tape
90 ft	0.0465	Tape to Tape
95 ft	0.0342	Tape to Tape
100 ft	0.0423	Tape to Tape

## TIME AND FREQUENCY

**NVLAP Code:** 20/F02

Time Dissemination

<i>Range in hours</i>	<i>Best Uncertainty (<math>\pm</math>) in seconds<sup>note 1</sup></i>	<i>Remarks</i>
3	0.080	Stop Watches

## MECHANICAL

**NVLAP Code:** 20/M08

Mass - Metric

<i>Range</i>	<i>Best Uncertainty (<math>\pm</math>)<sup>note 1</sup></i>	<i>Remarks</i>
50 kg	0.40 g	Echelon II
30 kg	0.15 g	Echelon II

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## CALIBRATION LABORATORIES

NVLAP LAB CODE 200421-0

Scope Revised: 2006-07-12

25 kg	31 mg	Echelon II
20 kg	22 mg	Echelon II
10 kg	16 mg	Echelon II
5 kg	3.5 mg	Echelon II
4 kg	3.6 mg	Echelon II
3 kg	2.3 mg	Echelon II
2 kg	2.8 mg	Echelon II
1 kg	0.49 mg	Echelon II
500 g	0.33 mg	Echelon II
300 g	0.22 mg	Echelon II
200 g	0.14 mg	Echelon II
100 g	93 µg	Echelon II
50 g	77 µg	Echelon II
30 g	63 µg	Echelon II
20 g	39 µg	Echelon II
10 g	20 µg	Echelon II
5 g	14 µg	Echelon II
3 g	10 µg	Echelon II
2 g	8 µg	Echelon II
1 g	7 µg	Echelon II
500 mg	6 µg	Echelon II
300 mg	6 µg	Echelon II
200 mg	5 µg	Echelon II
100 mg	5 µg	Echelon II
50 mg	4 µg	Echelon II
30 mg	2 µg	Echelon II
20 mg	3 µg	Echelon II
10 mg	2 µg	Echelon II
5 mg	2 µg	Echelon II
3 mg	2 µg	Echelon II
2 mg	1 µg	Echelon II
1 mg	1 µg	Echelon II

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## CALIBRATION LABORATORIES

NVLAP LAB CODE 200421-0

Scope Revised: 2006-07-12

### Mass - Avoirdupois

1000 lb	5.4 g	Echelon II
500 lb	2.6 g	Echelon II
250 lb	36 g	Echelon II
200 lb	17 g	Echelon II
100 lb	0.19 g	Echelon II
50 lb	31 mg	Echelon II
30 lb	15 mg	Echelon II
25 lb	15 mg	Echelon II
20 lb	4 mg	Echelon II
10 lb	3.5 mg	Echelon II
5 lb	2.5 mg	Echelon II
3 lb	2.8 mg	Echelon II
2 lb	0.3 mg	Echelon II
1 lb	0.13 mg	Echelon II
0.5 lb	0.12 mg	Echelon II
0.3 lb	0.07 mg	Echelon II
0.25 lb	0.070 mg	Echelon II
0.2 lb	0.067 mg	Echelon II
0.1 lb	0.050 mg	Echelon II
0.05 lb	0.019 mg	Echelon II
0.03 lb	0.018 mg	Echelon II
0.02 lb	0.018 mg	Echelon II
0.01 lb	0.007 mg	Echelon II
0.005 lb	0.006 mg	Echelon II
0.003 lb	0.005 mg	Echelon II
0.002 lb	0.005 mg	Echelon II
0.001 lb	0.005 mg	Echelon II
500 µlb	0.005 mg	Echelon II
300 µlb	0.005 mg	Echelon II
200 µlb	0.002 mg	Echelon II
100 µlb	0.002 mg	Echelon II
50 µlb	0.002 mg	Echelon II
30 µlb	0.002 mg	Echelon II

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NVLAP LAB CODE 200421-0

Scope Revised: 2006-07-12

20 $\mu$ lb	0.002 mg	Echelon II
10 $\mu$ lb	0.002 mg	Echelon II
5 $\mu$ lb	0.001 mg	Echelon II
3 $\mu$ lb	0.001 mg	Echelon II
2 $\mu$ lb	0.001 mg	Echelon II
1 $\mu$ lb	0.001 mg	Echelon II
Mass – Metric		
1000 kg	12 g	Echelon III
500 kg	11.3 g	Echelon III
250 kg	9.3 g	Echelon III
200 kg	9.5 g	Echelon III
100 kg	14 g	Echelon III
50 kg	0.19 mg	Echelon III
30 kg	0.19 mg	Echelon III
25 kg	0.18 mg	Echelon III
20 kg	29 mg	Echelon III
10 kg	86 mg	Echelon III
5 kg	81 mg	Echelon III
4 kg	47 mg	Echelon III
3 kg	8.1 mg	Echelon III
2 kg	2.5 mg	Echelon III
1 kg	2.7 mg	Echelon III
500 g	1.9 mg	Echelon III
464.08 g	1.5 mg	Echelon III
300 g	1.9 mg	Echelon III
200 g	0.20 mg	Echelon III
185.63 g	0.25 mg	Echelon III
100 g	83 $\mu$ g	Echelon III
92.82 g	0.21 mg	Echelon III
50 g	77 $\mu$ g	Echelon III
30 g	63 $\mu$ g	Echelon III
20 g	37 $\mu$ g	Echelon III
10 g	50 $\mu$ g	Echelon III

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NVLAP LAB CODE 200421-0

Scope Revised: 2006-07-12

5 g	14 µg	Echelon III
3 g	9 µg	Echelon III
2 g	7 µg	Echelon III
1 g	6 µg	Echelon III
500 mg	6 µg	Echelon III
300 mg	5 µg	Echelon III
200 mg	4 µg	Echelon III
100 mg	4.0 µg	Echelon III
50 mg	4.0 µg	Echelon III
30 mg	2.0 µg	Echelon III
20 mg	2.0 µg	Echelon III
10 mg	2.0 µg	Echelon III
5 mg	2.0 µg	Echelon III
3 mg	2.0 µg	Echelon III
2 mg	1.0 µg	Echelon III
1 mg	1.0 µg	Echelon III
Mass - Avoirdupois		
6000 lb	66 g	Echelon III
5000 lb	98 g	Echelon III
3000 lb	35 g	Echelon III
2500 lb	21 g	Echelon III
2000 lb	20 g	Echelon III
1000 lb	6.8 g	Echelon III
500 lb	3.4 g	Echelon III
250 lb	4.0 g	Echelon III
200 lb	4.0 g	Echelon III
100 lb	0.20 g	Echelon III
75 lb	0.20 g	Echelon III
50 lb	0.18 g	Echelon III
30 lb	0.18 g	Echelon III
25 lb	0.16 g	Echelon III
20 lb	0.16 g	Echelon III
10 lb	4.3 mg	Echelon III

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NVLAP LAB CODE 200421-0

Scope Revised: 2006-07-12

5 lb	8.1 mg	Echelon III
4 lb	2.5 mg	Echelon III
3 lb	2.5 mg	Echelon III
2 lb	2.7 mg	Echelon III
1 lb	1.9 mg	Echelon III
0.5 lb	0.8 mg	Echelon III
0.03 lb	0.19 mg	Echelon III
0.25 lb	0.28 mg	Echelon III
0.2 lb	0.28 mg	Echelon III
0.1 lb	0.20 mg	Echelon III
0.05 lb	0.18 mg	Echelon III
0.03 lb	0.12 mg	Echelon III
0.02 lb	82 µg	Echelon III
0.01 lb	11 µg	Echelon III
0.005 lb	13 µg	Echelon III
0.003 lb	8 µg	Echelon III
0.002 lb	11 µg	Echelon III
0.001 lb	7 µg	Echelon III
2 oz	0.35 mg	Echelon III
1 oz	0.21 mg	Echelon III
0.5 oz	0.20 mg	Echelon III
0.25 oz	0.13 mg	Echelon III
0.125 oz	74 µg	Echelon III
0.0625 oz	88 µg	Echelon III
0.0313 oz	88 µg	Echelon III

**NVLAP Code:** 20/M12

Volume

Range	Best Uncertainty ( $\pm$ ) <sup>note 1</sup>	Remarks
1000 gal	88 in <sup>3</sup>	Volume Transfer
100 gal	5.4 in <sup>3</sup>	Volume Transfer
50 gal	2.1 in <sup>3</sup>	Volume Transfer
5 gal	0.25 in <sup>3</sup>	Volume Transfer

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Scope Revised: 2006-07-12

20 l	3.0 ml	Volume Transfer
1 gill	0.11 ml	Volume Transfer
20 gal	0.55 in <sup>3</sup>	Water Draw – DSVP
5 gal	0.001 gal	Gravimetric
1 gill	0.10 ml	Gravimetric
25 ml	0.14 ml	Gravimetric

## THERMODYNAMIC

**NVLAP Code:** 20/T03  
Laboratory Thermometers

<b>Range in °C</b>	<b>Best Uncertainty (<math>\pm</math>) in °C<sup>note 1</sup></b>	<b>Remarks</b>
0	0.04	Liquid in Glass
20	0.13	Liquid in Glass
30	0.17	Liquid in Glass
50	0.18	Liquid in Glass
60	0.13	Liquid in Glass
90	0.11	Liquid in Glass
100	0.15	Liquid in Glass

1. Represents an expanded uncertainty using a coverage factor,  $k = 2$ , at an approximate level of confidence of 95 %.

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